Cybersecurity Upskilling for Criminal Justice Professionals

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Poster Abstract. A diverse and interdisciplinary cybersecurity workforce plays a crucial role in enhancing cybersecurity worldwide [1, 2]. Criminal justice (CJ) professionals are at the forefront of investigating cybercrimes and bringing cybercriminals to justice. Their expertise and efforts in cybersecurity are essential to maintaining the integrity of our digital ecosystem and ensuring the safety and security of individuals, organizations, and society. However, many CJ professionals have not received comprehensive cybersecurity education and training [3]. This knowledge gap poses significant challenges and limitations to effectively combating cybercrime. With the sponsorship of National Science Foundation, The University of Washington Tacoma and North Dakota State University are developing scenario-based offensive security and Web-based showcase labs with interactive simulations and case studies in three progressive courses, revolutionizing cybersecurity education for future CJ professionals. This project integrates artificial intelligence into the curriculum to enhance CJ professionals' capabilities. Our ultimate goal is to develop a skilled workforce of CJ professionals with cybersecurity and privacy knowledge, addressing the critical need for such expertise in the field. Our poster will explain the motivations behind our project, the course framework used, and preliminary implementation results.

Keywords: Cybersecurity, Criminal Justice, Artificial Intelligence

References

1. Hulatt, D., Stavrou, E. (2021). The Development of a Multidisciplinary Cybersecurity Workforce: An Investigation. In: Furnell, S., Clarke, N. (eds) Human Aspects of Information Security and Assurance. HAISA 2021. IFIP Advances in Information and Communication Technology, vol 613. Springer, Cham. https://doi.org/10.1007/978-3-030-81111-2_12
2. Sample, Char; Loo, Sin Ming; Justice, Connie; Taylor, Eleanor; and Hampton, Clay. (2020). "Cyber-Informed: Bridging Cybersecurity and Other Disciplines". *Proceedings of the 19th European Conference on Cyber Warfare and Security, ECCWS 2020,* 334-341.

3. L. Hadlington, K. Lumsden, A. Black, and F. Ferra, “A Qualitative Exploration of Police Officers’ Experiences, Challenges, and Perceptions of Cybercrime,” Policing-A journal of policy and practice, vol. 15, no. 1, pp. 34–43, Mar. 2021, doi: 10.1093/POLICE/PAY090.

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